

CLAIMS

WE CLAIM:

1. A method of manufacturing reduced and low-fat cheese comprising the steps of:
 - (a) combining rice grains and heated water in a mixture;
 - (b) subjecting the mixture to high shear and heat to liquefy the mixture without substantial release of water;
 - (c) combining the heated and liquefied mixture with finished cheese prior to cooling and molding of the cheese; and
 - (e) molding and cooling the combined mixture.
2. The method of claim 1 wherein at step (b) the heated water is at a temperature substantially equal to boiling water.
3. The method of claim 1 wherein at step (b) the mixture is heated to a temperature of 85 degrees Centigrade.
4. The method of claim 1 wherein the amount of rice and water by volume stand in a ratio substantially equal to 1:2.
5. The method of claim 1 wherein the high shear of step (b) is provided by a mixer head in a heated vessel.
6. The method of claim 1 wherein the high shear of step (b) is provided by a shear pump recirculating the mixture through a heated vessel.
7. The method of claim 1 including the step of accumulating the liquefied mixture in a heated tank after step between steps (b) and (c)
whereby step steps (a) and (b) may be performed as a batch process and steps (c) - (e) may be performed continuously.
8. The method of claim 1 step of heating the walls of the vessel during steps (a) and (b).
9. The method of claim 1 step of scraping the walls of the vessel during steps (a) and (b).

10. An apparatus for manufacture of reduced and low-fat cheese from standard cheese and a rice based cheese substitute, the apparatus comprising:

a double walled vessel for receiving rice and water within an inner wall of the double walls and having an entry port and lower drain orifice communicating with a volume defined by the inner wall;

a steam source connected between the double walls to heat the inner wall;

a shear mixer having a mixing head suspended within the volume to contact rice and water placed therein;

a mixer for receiving a cheese and a rice water mixture and mixing them together;
and

a pump connected to the drain orifice to pump material to the mixer.

11. The apparatus of claim 10 including a valve having an inlet connected to the pump and having a first outlet connected to the entry port and a second outlet connected to the mixer;

whereby material may be circulated between the drain port and the entry port or transported from the drain pot to the mixer.

12. The apparatus of claim 10 wherein the pump is a shear pump.